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| 10/666,464 | 09/19/2003 | Thomas E. Creamer | BOC9-2003-0030 (399) | 8346 |
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| AKERMAN SENTERFITT P. O. BOX 3188 WEST PALM BEACH, FL 33402-3188 | | | EXAMINER KAWSAR, ABDULLAH AL | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/666,464 | CREAMER ET AL. | |
| | Examiner | Art Unit | |
| | Abdullah-AI Kawsar | 2109 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>02/02/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending.

Specification

2. The use of the trademark "JAVA" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 8 and 13 does not specify what are the comparison threshold specification that would trigger executing a operation and also doesn't close the type operation would be executed from the comparison.

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5. Claims 2-7, 9-12 and 14-20 are dependent claims of claims 1, 8 and 13. Therefore they are rejected under the same rational.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1 – 7, 13 – 19 and 20 are directed non-statutory subject matter. While restricting resource consumption could be reasonably concrete result, it appears the claims 1, 13 and 20 do not produce a claimed result to form the basis statutory subject matter under 35 USC 101.

8. Claims 2-7 and 14-19 are dependent on claims 1 and 13 accordingly and do not produce any further concrete result. They are therefore rejected under same rational.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. Claims 1, 3-11, 13 and 15-20 rejected under 35 U.S.C. 102(b) as being anticipated by Boukobza et al. (Boukobza) US Patent no. 6,122,664.

As per claim 1, Boukobza discloses:

- *associating a ghost agent with a host* (col 2 lines 22-25, "monitoring is configured and then distributed in a filtered way from the management node to autonomous agents, an autonomous agent being installed in each node to be monitored in order") autonomous agent(ghost agent) that is associated with a host(node).

- *ascertaining a resource utilization for said ghost agent and said host combined* (col 5 lines 2-4, "Each node to be monitored has its own files SL ("scanlog") of parameters, conditions and associated actions which allow it to control its own monitoring") parameters, conditions are the resource utilization conditions that are being monitored.

- *comparing said resource utilization to a usage threshold* (col 2 lines 30-35, "each agent comprising a plurality of specific modules specific to the different object types or to a particular domain, each specific module measuring static and dynamic parameters specific to the object type it monitors and collecting these measurements, testing conditions on these parameters relative to predefined thresholds") measurements are compared with a predefined threshold.

- *determining whether at least one operation of said ghost agent is to be executed responsive to said comparing step* (col 2 lines 49-51, "measure specific parameters of each

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application, to test conditions on these parameters relative to thresholds, and then to execute an action in order to warn of a problem”) from the measurements values operation is executed.

As per claim 3, all the rejection of claim 1 incorporates and further Boukobza discloses:

- deactivating said ghost agent according to said comparing step; starting an idle timer; activating said ghost agent when said idle timer reaches a predetermined time (col 6 lines 56-66, “indicates the maximum cpu time allocated for the autonomous agent (generic agent and specific modules) in a node. If the maximum is reached, the modules modify the frequency of the parameter measurement and/or give priority to certain operations. (2) ==>PERIOD seconds; (14) specifies the minimum time interval between two measurements of a parameter.”) minimum time interval between measurements are the idle time which is predefined(period) and activates the agent once the period expires.

As per claim 4, all the rejection of claim 1 incorporates and further Boukobza discloses:

- identifying a first operation that requires a first quantity of computing resources and identifying a second operation that requires a second quantity of computing resources, wherein said second operation can be performed by said ghost agent in place of said first operation, and wherein said determining step selects between said first operation and said second operation based upon said comparing step (col 2 lines 40-46, “the use of autonomous agents makes it possible to ensure the proper running of the monitored applications in all of the nodes by means of an autonomous and efficient process, to rapidly feed back the useful information from the nodes to the management node, and to automatically initiate actions on

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certain conditions or possibly to recommend an action.”) multiple agents are monitoring multiple nodes(host) that has different monitoring measurements and responses to the feedback from the monitoring agent with different actions(selecting operation).

As per claim 5, all the rejection of claim 3 incorporates and further Boukobza discloses:

- further comprising the step of: storing at least one operation in an operation queue when said ghost agent is deactivated (col 7 lines 59-64, “BACKUP.sub.-- NODE is the name of the node in which the object (the Tuxedo "master node", the Oracle instance, etc.) will run in case the application is switched to another node, for reasons of operation or due to a stop, for example a failure, of the original node. This information is used to quick start the monitoring of the object in the backup node.”) when a node is not monitored the backup node will run and keep all the information for the agent.

As per claim 6, all the rejection of claim 5 incorporates and further Boukobza discloses:

- further comprising the step of: executing said stored operation when said ghost agent is activated (col 7 lines 59-64, “BACKUP.sub.-- NODE is the name of the node in which the object (the Tuxedo "master node", the Oracle instance, etc.) will run in case the application is switched to another node, for reasons of operation or due to a stop, for example a failure, of the original node. This information is used to quick start the monitoring of the object in the backup node.” and Col 27 lines 12-19 “Each agent is automatically "reactivable", which means that when an agent becomes active in a node, it begins by executing the command "mkitab" in order

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to place itself in the initialization table "inittab" so that it can be reactivated if the process dies or if the node malfunctions and is then reactivated")

As per claim 7, all the rejection of claim 5 incorporates and further Boukobza discloses:

- wherein said operation queue is disposed within said ghost agent (col 27 lines 16-19,

"When an agent is deactivated, it executes the command "rmitab" so that it will not be reactivated, in which case the management node no longer recognizes it") if an agent is deactivated from the node it is not recognized by the management node anymore which means it does not exist so inherently the queue will be disposed.

As per claim 8, Boukobza discloses:

- an interface for associating said ghost agent with a host (col 2 lines 22-25,

"monitoring is configured and then distributed in a filtered way from the management node to autonomous agents, an autonomous agent being installed in each node to be monitored in order") autonomous agent(ghost agent) that is associated with a host(node).

- a ghost log configured to record data relating to said host (col 5 lines 2-4, "Each node to be monitored has its own files SL ("scanlog") of parameters, conditions and associated actions which allow it to control its own monitoring") scanlog is the log file that records the data.

- a ghost controller configured to compare resource utilization levels with established thresholds, and wherein said ghost agent automatically moves within a grid environment to

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follow movements of said host (col 2 lines 9-11, "The starting and stopping of the monitoring process are controlled by the management node" and col 2 lines 23-39, "A parameter contains the description of its measurement (command to be executed, trace, curve display, etc.), the description of a certain number of single conditions related to the measurement just performed (operator, threshold, etc.) along with, for each condition, the action to be initiated when this condition is true") measurements age compared with a predefined threshold.

As per claim 9, all the rejection of claim 8 incorporates and further Boukobza discloses:

- wherein said ghost controller is further configured prevent said ghost agent from executing at least one operation based upon said comparison (col 2 lines 40-46, "the use of autonomous agents makes it possible to ensure the proper running of the monitored applications in all of the nodes by means of an autonomous and efficient process, to rapidly feed back the useful information from the nodes to the management node, and to automatically initiate actions on certain conditions or possibly to recommend an action.") initiating actions means stopping or switching or initiating actions.

As per claim 10, all the rejection of claim 8 incorporates and further Boukobza discloses:

- an operation queue configured to queue operations for execution by said ghost agent (col 21 lines 6-13, "The autonomous agent according to the idea of the invention is chiefly composed of a generic agent and of a plurality of modules specific to each type of object: Oracle, Tuxedo, system, DPG, FSX, SAP, etc. The global operation consists of measuring parameters, if necessary storing them in a "trace" file and allowing their display through the interface GUI, of

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evaluating the single or multiple conditions and of executing the action linked to the true condition, for all the objects described in the configuration file.”)

As per claim 11, all the rejection of claim 8 incorporates and further Boukobza discloses:

- further comprising: a ghost identifier configured to identify said ghost agent to components within said grid environment. ((col 2 lines 30-35, “each agent comprising a plurality of specific modules specific to the different object types or to a particular domain, each specific module measuring static and dynamic parameters specific to the object type it monitors and collecting these measurements)

As per claim 20, Boukobza discloses:

-means for associating a ghost agent with a host (col 2 lines 22-25, “monitoring is configured and then distributed in a filtered way from the management node to autonomous agents, an autonomous agent being installed in each node to be monitored in order”) inherently means for associating.

- means for ascertaining a resource utilization for said ghost agent and said host combined (col 5 lines 2-4, “Each node to be monitored has its own files SL ("scanlog") of parameters, conditions and associated actions which allow it to control its own monitoring”) inherently means for ascertaining.

- *means for comparing said resource utilization to a usage threshold* (col 2 lines 30-35, “each agent comprising a plurality of specific modules specific to the different object types or to a particular domain, each specific module measuring static and dynamic parameters specific to the object type it monitors and collecting these measurements, testing conditions on these parameters relative to predefined thresholds”) inherently means for comparing.

- *means for determining whether at least one operation of said ghost agent is to be executed responsive to said comparing step* (col 2 lines 49-51, “measure specific parameters of each application, to test conditions on these parameters relative to thresholds, and then to execute an action in order to warn of a problem”) inherently means for determining.

Claims 13 and 15-19 are computer readable medium claims of claims 1 and 3-7 above.

They are therefore rejected under the same rational.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2 and 14 is rejected under 35 U.S.C. 103(a) being unpatentable over Boukobza et al. (Boukobza) US Patent no. 6,122,664 in view of "Design and Evaluation of Rsource Selection Framework for Grid Application" by Ian Foster(Foster).

As per claim 2, Boukobza discloses all the element of claim 2 except, ***determining a second value specifying a usage of a second resource type; and calculating said resource utilization based on said first value and said second value.***

However Foster discloses:

- determining a first value specifying a usage of a first resource type; determining a second value specifying a usage of a second resource type; and calculating said resource utilization based on said first value and said second value (page 3 col 2 lines 19-26, "The algorithm repeatedly removes the "best" resource remaining in the ClassAd pool ("best" being determined by the rank of the resulting set) and adds it to the "candidate set." If the "candidate set" fulfills the specified requirements and has higher rank than the "best set" so far, the "candidate set" become the new "best set."")

Therefore, it would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Foster into the method of Boukobza to have multiple resources with multiple value to compare utilization. The modification would have been obvious because one of the ordinary skills of the art would have multiple values of resources for the comparison to have the best resource allocation value for fast processing.

Claim 14 is computer readable medium claim of claim 2 above. Therefore it is rejected under the same rational.

13. Claim 12 is rejected under 35 U.S.C. 103(a) being unpatentable over Boukobza et al. (Boukobza) US Patent no. 6,122,664 in view of Putzolu et al. (Putzolu) US Patent No. 6,681,243 B1.

As per claim 12 Boukobza discloses all the elements of claim 12 except, *disassociating said ghost agent from said host; and means for associating said ghost agent with a different host.*

However Putzolu discloses:

- means for disassociating said ghost agent from said host; and means for associating said ghost agent with a different host (col 3 lines 59-61, "Agents are software objects which may execute on a device or environment, move to another device or operating environment, and resume execution.")

Therefore, it would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Foster into the method of Boukobza to have a ghost agent associating from one host to another. The modification would have been obvious because one of the ordinary skills of the art would have an agent that can associate with one host to another to utilize the agent resource and time.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

TITLE: Process for monitoring a plurality of object types of a plurality of nodes from a management node in a data processing system by distributing configured agents, US Patent No. 6,122,664.

TITLE: Network environment supporting mobile agents with permissioned access to resources, US Patent No. 6,681,243 B1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdullah-Al Kawsar whose telephone number is 571-270-3169.


The examiner can normally be reached on 7:30am to 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chameli Das can be reached on 571-272-3696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AK


JEAN M. CORRIELUS
PRIMARY EXAMINER
Art Unit 2162
Date: 7/15/07